ABSTRACT.

Method of Cogeneration of Heat and Power where Electricity Generating Device(s) – EGD- exhaust gases are used as oxidiser in high temperature heat needs.

This invention concerns a new method of applying cogeneration of heat and power in cases where generation of high temperature –up to 1500 oC or more - heat is needed locally in multiple positions. This method involves the use of the EGD -Electricity Generating Device- exhaust gases –e.g. the exhaust gases of a turbine set -as oxidiser for the combustion of additional fuel in the kilns and the furnaces of high temperature industries –e.g. ceramics, heavy clay, glass, steel/metal, cement industry etc.- after part or all of the EGD exhaust gases have been increased their temperature in a heat exchanging process by cooling the processed material or the exhaust gases produced in the kiln or the furnace, eliminating the air which is usually needed as oxidiser medium and all exhaust gases which increased their temperature are fed into the firing region of the kiln or the furnace. It is additionally characterised by the ability to enrich EGD exhaust gases with a mixture of air and/or oxygen of various temperature levels and/or compositions before used as oxidiser and the ability to use part of the EGD exhaust gases in other heating consuming processes.

It is applicable in the above mentioned industries and other industry sectors and general in applications where relatively high temperatures are needed .